

RESEARCH AND DEVELOPMENT IN THE 2001 BUDGET: A BRIEF OVERVIEW

INTRODUCTION

This report contains information on Federal proposed fiscal year (FY) 2001 budget authority for the research and development (R&D) components of agency programs. The data were submitted by Federal agencies to the Office of Management and Budget in early 2000. This report includes historical data not affected by current legislation and therefore can be used for tracking funding trends. The report also contains detailed data on Federal R&D authorizations not readily available from other sources. How actions by Congress and the Administration affect the outcome of R&D funding levels will become apparent in 2001-2002.

TOTAL R&D

In the first half of 2000, the administration proposed a total budget authority of \$82.7 billion for all Federal R&D programs in its FY 2001 budget, 2.5 percent more than the preliminary FY 2000 R&D total of \$80.7 billion. After adjusting for expected inflation, R&D budget authority would increase 0.5 percent. Budget authority for R&D grew 4.0 percent between FYs 1999 and 2000 (an increase of 2.5 percent in constant dollars).

The five largest budget functions with respect to absolute R&D funding—national defense; health; space research and technology; general science; and natural resources and environment—together account for 92.4 percent of all proposed Federal R&D funding.

Among individual functions, the largest FY 2001 R&D decrease (\$432 million) is proposed for defense (budget function code 050), which includes military programs of the Department of Defense (DoD) and the atomic energy defense activities of the Department of Energy (DOE). A 1.0-percent decrease in national defense R&D budget authority (in current dollars) is proposed. With this reduction, national defense would account for half (\$41.4 billion) of the Federal R&D total. The defense share of Federal R&D budget authority has decreased from 62.6 percent in FY 1990 to a proposed 50.1 percent in FY 2001. DoD's FY 2001 military research, development, test, and evaluation

(RDT&E) budget would account for 91.4 percent (\$37.9 billion) of the national defense R&D. R&D funding for DOE's atomic energy defense activities would account for 7.5 percent (\$3.1 billion) of the proposed FY 2001 national defense R&D.

The nondefense share of Federal R&D budget authority has increased steadily, rising from 37.4 percent of total in FY 1990 to a proposed 49.9 percent in FY 2001. In the period from FYs 1990-2001, the nondefense dollars have increased \$17.5 billion (\$10.6 billion in constant dollars), with an annualized rate of growth of 5.1 percent (3.0 percent in constant terms). The President's budget contains a \$2.4-billion increase in total nondefense R&D budget authority, to \$41.3 billion. This level represents a 6.2-percent increase over preliminary FY 2000 funding.

Among individual budget functions, health (budget function code 550) would receive the largest FY 2001 R&D budget increase, \$1.1 billion above the FY 2000 level and constituting 22.8 percent (\$18.9 billion) of the Federal R&D budget authority. The bulk of the health account (\$17.9 billion) would be for National Institutes of Health (NIH) programs. The R&D budgets of all 18 NIH institutes would increase, and total R&D funding for health activities at NIH is expected to increase by \$1.0 billion, or 6.0 percent, in FY 2001. The National Cancer Institute would receive the largest portion (\$3.4 billion) of NIH R&D dollars; followed by the National Heart, Lung, and Blood Institute, which would receive \$2.1 billion. Four other institutes—the National Institute of Allergy and Infectious Diseases; the National Institute of General Medical Sciences; the National Institute of Diabetes and Digestive and Kidney Diseases; and the National Institute of Neurological Disorders and Stroke—are each expected to receive more than \$1 billion.

The Administration proposed a 3.4-percent increase (up \$285 million to \$8.7 billion) in R&D budget authority for space research and technology activities (budget function code 252), which includes space programs of the National Aeronautics and Space Administration (NASA). The largest share of NASA's R&D activities comprise space science (31.0 percent of NASA's

proposed R&D activities); the space station (28.2 percent); and earth science (18.2 percent). In all, space research and technology accounts for 10.6 percent of the total proposed Federal R&D budget authority.

The Administration has proposed that research funding for general science (budget function code 251) increase 13.2 percent, or more than \$600 million in FY 2001, to a total of \$5.5 billion. This budget function category includes general science and basic research programs of the National Science Foundation (NSF) and DOE. NSF would account for 57.5 percent of these dollars, and DOE contributing the rest of the general science funding. NSF supports research in mathematical and physical sciences; geosciences; biological sciences; engineering; computer and information sciences; and social, behavioral, and economic sciences. DOE's major funded activities for general science R&D (each more than \$300 million) include support for high energy physics; nuclear physics; basic energy sciences; and biological and environmental research. Under the proposed budget, general science accounts for 6.7 percent of the total Federal R&D budget authority in FY 2001.

The Administration's request for national resources and environment R&D (budget function code 300) is \$1.9 billion for FY 2001, up 1.4 percent from the FY 2000 level (but a 0.6-percent decrease in constant dollars). Five agencies provide support for R&D activities in natural resources and environment: the Department of the Interior (DOI), which would account for 30.2 percent of the funding in this area; the Department of Commerce (28.8 percent); the Environmental Protection Agency (EPA) (27.5 percent); the Department of Agriculture (USDA) (11.9 percent); and DoD's Army Corps of Engineers (1.7 percent). Natural resources and environment R&D would account for 2.3 percent of the total Federal R&D budget authority.

Of the remaining 11 budget functions with R&D funding, transportation (R&D budget at \$1.7 billion), agriculture (\$1.5 billion), and energy (\$1.2 billion) each account for between 1 to 2 percent of proposed Federal funding of R&D for FY 2001. The remaining eight functions each account for less than 1 percent of the total FY 2001 proposed R&D budget authority.